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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,041	01/22/2004	Graham Hawkes	770.02	6991
8685	7590	01/12/2006	EXAMINER	
DERGOSITS & NOAH LLP			OLSON, LARS A	
FOUR EMBARCADERO CENTER, SUITE 1450			ART UNIT	
SAN FRANCISCO, CA 94111			PAPER NUMBER	

3617

DATE MAILED: 01/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/763,041	Applicant(s) HAWKES, GRAHAM	
	Examiner Lars A. Olson	Art Unit 3617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 December 2005.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-89 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-89 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 5, 2005 has been entered.

2. An amendment was received from the applicant on December 5, 2005.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, 6-9, 14-17, 38-42 and 52-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doolittle (US 2,720,367) in view of Ness (US 6,371,041).

Doolittle discloses a submersible, as shown in Figures 1-7, that is comprised of a hull, defined as Part #10, with at least one pressure pod, defined as Part #12, for accommodating at least one person in a recumbent sitting position, at least one pair of

fixed wings that are disposed on said hull, as shown in Figure 2, at least one elevator, defined as Part #27, that is disposed on said hull, a thruster, defined as Part #19, and a steering means, as shown in Figure 1, where said wings have ailerons, as shown in Figure 2 and described in lines 46-52 of column 1, that are movable in opposite directions with respect to each other to provide said submersible with the ability to roll. Said submersible has positive buoyancy, and said at least one pair of fixed wings is structured to generate a balancing downward force in response to forward movement of said submersible in order to counteract the positive buoyancy of said submersible, as shown in Figure 6.

Doolittle, as set forth above, discloses all of the features claimed except for the use of a submersible having a center of buoyancy that is in close proximity to its center of gravity, and a pressure pod made from sand cast aluminum.

Ness discloses an undersea vehicle, as shown in Figures 1a-3, that is comprised of a hull, defined as Part #12, a pair of ailerons, defined as Part #26, that are disposed on said hull, at least one buoyancy tank, defined as Part #28, for providing a variable buoyancy, and a center of buoyancy that is in close proximity to a center of gravity of said vehicle, as shown in Figures 1a-c, and described in lines 36-55 of column 6 and lines 40-49 of column 7.

The use of a pressure pod made from a specific material would be considered by one of ordinary skill in the art to be a design choice based upon the required strength and physical characteristics of said pressure pod.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to utilize a submersible with a center of buoyancy located in close proximity to its center of gravity, as taught by Ness, and a pressure pod made from sand cast aluminum in combination with the submersible as disclosed by Doolittle for the purpose of providing a submersible with improved balance and a pressure pod that is both strong and lightweight.

5. Claims 21 and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doolittle in view of Ness, and further in view of Rowe (US 5,237,952).

Doolittle in combination with the teachings of Ness shows all of the features claimed except for the use of an emergency airbag.

Rowe discloses a submersible, as shown in Figures 1-6, that includes at least one emergency airbag, as described in line 48 of column 2.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to utilize an emergency airbag in combination with a submersible, as taught by Rowe, in combination with the submersible as disclosed by Doolittle and the teachings of Ness for the purpose of providing a submersible with an additional flotation means for use during emergency situations requiring added buoyancy.

6. Claims 4, 5, 12, 13, 18-20, 24-32, 36, 37, 43-46, 50, 51, 57-60, 64-72, 76-84, 88 and 89 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doolittle in view of Ness, and further in view of Schubert (US 3,598,074).

Doolittle in combination with the teachings of Ness shows all of the features claimed except for the use of a submersible with a pressure pod that is separate from

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and contained within a hull of a submersible, two pressure pods for accommodating at least two persons, three pressure pods for accommodating at least three persons, a dome access hatch for said pressure pod, a life support system for said pressure pod, and at least one buoyancy tank for providing variable buoyancy to said submersible.

Schubert discloses a submersible, as shown in Figures 1-3, that is comprised of a hull, defined as Part #10, that contains four separate pressure pods, defined as Part #18, that each accommodate at least one person, as shown in Figure 2, and have a dome access hatch, defined as Part #50, as well as a life support system, defined as Part #52. At least one buoyancy tank, defined as Part #70 or 72, is also provided on said submersible in order to provide variable buoyancy to said submersible.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to utilize a submersible with a pressure pod that is separate from and contained within a hull of a submersible, two pressure pods for accommodating at least two persons, three pressure pods for accommodating at least three persons, a dome access hatch for said pressure pod, a life support system for said pressure pod, and at least one buoyancy tank for providing variable buoyancy to said submersible, as taught by Schubert, in combination with the submersible as disclosed by Doolittle and the teachings of Ness for the purpose of providing a submersible with improved life support and emergency rescue capabilities for its operators, as well as improved handling and control during operation.

7. Claims 33, 47, 73 and 85 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doolittle in view of Ness and Schubert, and further in view of Rowe.

Doolittle in combination with the teachings of Ness and Schubert shows all of the features claimed except for the use of an emergency airbag.

Rowe, as previously cited, discloses a submersible that includes at least one emergency airbag, as described in line 48 of column 2.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to utilize an emergency airbag in combination with a submersible, as taught by Rowe, in combination with the submersible as disclosed by Doolittle and the teachings of Ness and Schubert for the purpose of providing a submersible with an additional flotation means for use during emergency situations requiring added buoyancy.

8. Claims 10, 11, 22, 23, 62 and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doolittle in view Ness, and further in view of Kohnen (US 5,704,309).

Doolittle in combination with the teachings of Ness shows all of the features claimed except for the use of a submersible with at least one pressure pod that accommodates at least two or three persons.

Kohnen discloses a submersible, as shown in Figures 1-12, that is comprised of a hull, defined as Part #10, with a pressure pod, defined as Part #50, that is capable of accommodating at least three persons, as shown in Figure 1.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to utilize a submersible with at least one pressure pod that accommodates at least two or three persons, as taught by Kohnen, in combination with the submersible as disclosed by Doolittle and the teachings of Ness for the purpose of

providing a submersible with a pressure pod that is capable of accommodating more than one person.

9. Claims 34, 35, 48, 49, 74, 75, 86 and 87 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doolittle in view of Ness and Schubert, and further in view of Kohnen.

Doolittle in combination with the teachings of Ness and Schubert shows all of the features claimed except for the use of a submersible with at least one pressure pod that accommodates at least two or three persons.

Kohnen, as cited above, discloses a submersible that is comprised of a hull, defined as Part #10, with a pressure pod, defined as Part #50, that is capable of accommodating at least three persons, as shown in Figure 1.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to utilize a submersible with at least one pressure pod that accommodates at least two or three persons, as taught by Kohnen, in combination with the submersible as disclosed by Doolittle and the teachings of Ness and Schubert for the purpose of providing a submersible with a pressure pod that is capable of accommodating more than one person.

### ***Response to Arguments***

10. Applicant's arguments with respect to claims 1-89 have been considered but are moot in view of the new ground(s) of rejection.



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***Conclusion***

11. Any inquiry concerning this communication from the examiner should be directed to Exr. Lars Olson whose telephone number is (571) 272-6685.

lo

January 9, 2006

LARS A. OLSON  
PRIMARY EXAMINER

*Lars Olson*  
1/9/06